ABSTRACT OF THE DISCLOSURE

A system and method efficiently conveys Virtual Local Area Network (VLAN) membership information across a bridged network. In particular, an intermediate network device, such as a bridge, includes a plurality of ports for interconnecting entities of

5   a computer network. For each port, a Generic Attribute Registration Protocol (GARP) participant is established that has a compact GARP VLAN Registration Protocol (GVRP) application component and a GARP Information Declaration (GID) component. The GID component operates a plurality of state machines to maintain registration state for all of the VLANs of which the port has been made aware. The compact-GVRP application

10   component further includes an encoder/decoder unit that collapses VLAN registration information according to an encoding algorithm. The collapsed VLAN registration information is then loaded into a single compact-GVRP PDU message for transmission from the respective port. The encoder/decoder unit also recovers encoded VLAN registration from received compact-GVRP PDU messages for operating the state machines.